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published in

Journal of Vocational Behavior
2019

DOI (link to publisher)

[10.1016/j.jvb.2018.05.013](https://doi.org/10.1016/j.jvb.2018.05.013)

document version

Publisher's PDF, also known as Version of record

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citation for published version (APA)

Guan, Y., Arthur, M. B., Khapova, S. N., Hall, R. J., & Lord, R. G. (2019). Career boundarylessness and career success: A review, integration and guide to future research. *Journal of Vocational Behavior*, 110(Part B), 390-402. <https://doi.org/10.1016/j.jvb.2018.05.013>

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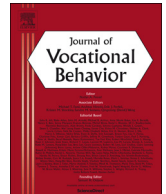
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Career boundarylessness and career success: A review, integration and guide to future research[☆]

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ARTICLE INFO

Keywords:

Boundaryless careers
Psychological mobility
Physical mobility
Career success
Career transition

ABSTRACT

The concept of boundaryless careers characterizes emerging career patterns that are less dependent on traditional organizational career management. Based on an evidence-based review of literature on the relationship between career boundarylessness and career success published from 1994 to 2018, we found that boundaryless careers have mixed effects on the various indicators of career success, and these effects depend on the operationalization of career boundarylessness, the motives (voluntary vs. involuntary), career competencies, adaptive capabilities and career resources held by individuals, as well as the structural constraints and institutional support for boundary-crossing behaviors. In addition, career success was also found to predict subsequent career mobility. Based on these findings, we develop an integrative model to understand the complicated and dynamic relationship between boundaryless careers and career success. This review serves as an important step to integrate theories and research on boundaryless careers and career success, and more interdisciplinary work should be done in the future to examine this question.

1. Introduction and rationale

The increasingly globalized economy, fast technological advancement and changing organizational structures have resulted in shifts into more flexible employment relationships and less predictable career patterns. With this background, it has been argued that employees' careers are becoming more “boundaryless” and less dependent on traditional organizational career management (Arthur, 1994; Arthur & Rousseau, 1996). For more than two decades, scholars have sought to understand the conceptualization, antecedents and effects of boundaryless careers, in order to analyze their implications for individual career development, organizational management and societal progress (Arthur, 2014; Greenhaus, Callanan, & DiRenzo, 2008). One of the key questions in this field is how the “boundarylessness” of careers influences career success, defined as “the accomplishment of desirable work-related outcomes at any point in a person's work experiences over time” (Arthur, Khapova, & Wilderom, 2005, p.179). Although empirical studies arising from Psychology, Management, Economics, Sociology and other disciplines have been conducted to examine this important question, these studies have not been systematically compared and synthesized, which hinders the knowledge advancement in this field (Arthur, 2014; Khapova & Arthur, 2011).

[☆] This research was supported by National Natural Science Foundation of China (NSFC, Project ID: 71728004). We thank Shenming Liu, Xinyu Fu, Hui Li, Yue Fu, Hanlin Hu and Xin Meng for their help in preparing for this manuscript.

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Several published review papers have tapped into the potential gains and losses associated with boundaryless careers (e.g., Arnold & Cohen, 2008; Arthur et al., 2005; Baruch & Vardi, 2016; Feldman & Ng, 2007; Greenhaus et al., 2008; Inkson, Gunz, Ganesh, & Roper, 2012; Sullivan & Baruch, 2009; Zeitz, Blau, & Fertig, 2009), but there has been no systematic review of the empirical studies on how boundaryless careers influence individual career success. The meta-analytic review by Ng, Eby, Sorensen, and Feldman (2005) focused on the general predictors of career success, but did not comprehensively analyze the role of career mobility in career success. The review paper by Feldman and Ng (2007) analyzed three types of career mobility (job mobility, organization mobility and occupation mobility) and their roles in career success, but this review did not fully cover the diverse forms of boundaryless careers, nor did it provide a systematic review of how the various indicators of career boundarylessness predict career success. The current review aims to address this gap by synthesizing fragmented results from different disciplines into a coherent framework through a systematic analysis of the empirical papers published since 1994 (marking Arthur's initial paper on boundaryless careers) concerning the relationship between career boundarylessness and career success.

A difficulty of integrating findings on the relationship between career boundarylessness and career success is the diverse theories and perspectives that have been used to examine this question (Arnold & Cohen, 2008; Arthur, 2014; Baruch & Vardi, 2016; Forrier, Sels, & Stynen, 2009; Greenhaus et al., 2008; Inkson et al., 2012; Zeitz et al., 2009). We propose that the different theoretical perspectives used in previous research are essentially complementary as they represent psychological, economic, social, and organizational factors that jointly shape the complicated effects of career boundarylessness on career success (Arthur, 2014; Khapova & Arthur, 2011; Tams & Arthur, 2010). The current paper extends prior reviews to advance the field in two ways. First, we amass the empirical studies from 1994 to 2018 to offer an updated review on how the different forms of career boundarylessness are related to career success. Second, we incorporate multiple theoretical perspectives to examine the diverse mechanisms and boundary conditions for the relationship between career boundarylessness and career success in order to pursue a more comprehensive and critical understanding of this relationship.

2. Definition, theory and hypothesis

2.1. Definition and measurement of career boundarylessness and career success

The concept of boundaryless careers refers to “sequences of job opportunities that go beyond the boundaries of single employment settings” (DeFillippi & Arthur, 1994, p. 307). Boundaryless careers can be conceived of in a variety of ways, for example, Arthur and Rousseau (1996, p. 6) propose “six meanings” of boundaryless careers. These meanings acknowledged that engaging in a boundaryless career might involve crossing a variety of different types of boundaries, including organizational, relational, hierarchical, work-life and psychological. However, this initial work did not propose a systematic structure for describing a boundaryless career. To clarify the structure and measurement of boundaryless careers, Sullivan and Arthur (2006) proposed a distinction between physical and psychological mobility. The physical mobility dimension refers to actual career movements and transitions across physical boundaries, whereas psychological mobility refers to one's psychological orientation towards making those movements. Physical mobility can be operationalized by the different forms of career transitions across jobs (hierarchical or lateral), organizations, occupations, industries, geographical locations, and employment patterns (e.g. unemployment, part-time employment, full-time employment, self-employment). In this paper, we comprehensively review what has been found about the relations between the diverse indicators of physical mobility and career success. We also review findings about the relationship of psychological mobility to career success. To do this, we adopt Briscoe and Hall's (2006) idea of boundaryless career orientation, comprised of two dimensions: (a) boundaryless mindset, which refers to a general preference to work with people outside one's current organization, and (b) mobility preference, which refers to a preference to move across different employers.

Career success can be measured by both objective and subjective indicators. Objective career success can be reflected in one's status (e.g., hierarchical position, promotions), earnings (e.g., salary) and professional competencies (Arthur et al., 2005; Ng et al., 2005; Nicholson & De Waal-Andrews, 2005). Subjective career success can be reflected in one's subjective evaluations of the attainments, work-life balance, health and well-being associated with his/her career development (Greenhaus, Parasuraman, & Wormley, 1990; Judge, Cable, Boudreau, & Bretz, 1995; Zhou, Sun, Guan, Li, & Pan, 2013). In this review, we will focus on both objective and subjective indicators of career success.

2.2. Theoretical framework

2.2.1. Costs and benefits of boundaryless careers

A commonality across boundaryless career theories is an assumption that individual and contextual factors interact to shape the outcomes of boundaryless careers. However, the theories diverge when considering the opportunities and gains, or alternatively, the challenges, costs, risks, and threats associated with boundaryless career transitions. Agentic perspectives, such as the boundaryless careers model (Arthur & Rousseau, 1996), as well as the sense-making and enacting model (Weick, 1996), posit that the non-linear and interrupted career paths manifested in boundaryless careers offer great opportunities for individuals to explore and build a career based on their own preferences. Career transitions often entail a variety of changes in roles, identities and work environments, which require the career movers to make sense of these changes by updating their knowledge of their new work settings (Ibarra, 1999; Weick, 1996). The transition process also offers opportunities for individuals to engage in various forms of learning and experimenting behaviors to develop new career competencies, construct new identities, build new social networks and accrue new career resources (Arthur, Claman, & DeFillippi, 1995; Arthur & Rousseau, 1996; Ibarra, 1999; Weick, 1996). The emerging opportunities in

career transitions thus enable individuals to accumulate valuable experiences and achieve high levels of person-environment integration, which are beneficial for their career success.

In spite of the potential benefits just discussed, [Gunz, Evans, and Jalland \(2000\)](#) argued that careers have not become boundaryless in an absolute sense, and that individuals still need to cross various boundaries existing in the labor markets during their career transitions. From a stress perspective (e.g., [Baruch & Vardi, 2016](#); [Currie, Tempest, & Starkey, 2006](#); [Greenhaus et al., 2008](#); [Mirvis & Hall, 1996](#)), the changes of job duties, social relations, work environments and family life that accompany career transitions incur various costs, risks and threats. These can consume career owners' time and resources, and may negatively impact their career development. For example, when individuals switch employers, the knowledge, skills and social support pertaining to former employers may not transfer to the new work settings, and extra efforts must be made to address these challenges and difficulties, which can be a draining process ([Baruch & Vardi, 2016](#); [Currie et al., 2006](#); [Greenhaus et al., 2008](#); [Jackson, 1996](#)). In addition, the unfolding model of voluntary turnover ([Lee & Mitchell, 1994](#)) and event system theory ([Morgeson, Mitchell, & Liu, 2015](#)) suggest that the shock incidents triggered by career transitions, such as unpredicted work or family-related problems, may further drain individuals' energy. As a result, the costs, threats and incidents associated with career transitions may bring risks to individuals' physical or mental health ([Halbesleben & Buckley, 2004](#)), or even negatively affect work-life balance ([Baker & Aldrich, 1996](#)). In sum, career boundarylessness may carry costs such as transition difficulties, physical/mental stresses, work-life conflicts and unexpected shock incidents, which in turn can negatively affect career success.

To successfully manage the threats and risks in career transitions, individuals need to adopt functional strategies, such as maintaining motivation, making future plans, and building new social networks ([O'Mahony & Bechky, 2006](#); [Zikic, Bonache, & Cerdin, 2010](#)). To sustain the effects of these proactive coping behaviors, individuals need relevant career competencies, adaptive abilities, and career resources, as discussed by a variety of theorists. For example, the competency model of boundaryless careers ([DeFillippi & Arthur, 1994](#)) and intelligent career theory ([Arthur et al., 1995](#)) propose that three types of competencies are key to effectively managing the challenges in a boundaryless career world (e.g., [Eby, Butts, & Lockwood, 2003](#)). Namely, these are competencies in "knowing-why" (e.g., maintaining motivation and constructing identity), "knowing-how" (e.g., developing relevant skills and expertise) and "knowing-whom" (e.g., building relationships and reputation). In addition, the protean career model ([Hall, 1976, 2004](#)) posits that adaptability and self-awareness serve as important psychological resources for individuals to self-direct their careers. Similarly, career construction theory ([Savickas, 2013](#)) suggests that the psychological resource of career adaptability is an important capability that facilitates individuals' career transitions. [Hirschi \(2012\)](#) developed a career resources model and proposed four types of critical career resources which are essential for career development in the modern context: identity resources, psychological resources, human capital resources and social resources. Thus, various career theories have suggested a number of specific factors including functional coping strategies, career capabilities and resources that can strengthen the positive effect, and weaken the negative effect, of career boundarylessness on career success.

2.2.2. The role of contextual and structural factors

While the agentic perspective emphasizes the actions of mobile individuals who voluntarily cross physical and psychological boundaries to achieve their career goals, it marginalizes the important roles of contextual factors in constraining or facilitating individuals' career transitions. The structural perspective of boundaryless careers posits that for even the most agentic career actors, their career trajectories and career success are still constrained by various structural factors such as demographic background, organizational policies, labor market segmentation, industrial characteristics, occupational barriers, social class, and government regulations ([Forrier et al., 2009](#); [Gunz et al., 2000](#); [Inkson et al., 2012](#); [Mayrhofer, Meyer, Steyrer, & Langer, 2007](#)). For instance, [Gunz et al. \(2000\)](#) argued that the career mobility of employees from the Canadian Biotechnology Industry (CBI) would be less likely to lead to positive career outcomes than employees in Silicon Valley, because the CBI is characterized by longer project timescales, lower density of firms and looser inter-firm connections, which constrain inter-organizational mobility and reduce its potential gains. In addition, labor markets in many industries and occupations are segmented by structural factors such as gender, age, ethnicity, and so on, which create extra difficulties and barriers for career movers to achieve career progress ([Forrier et al., 2009](#)). Therefore, we propose that structural constraints in career transitions reduce the positive effect and strengthen the negative effect of career boundarylessness on career success.

In addition to the constraining effects mentioned above, some researchers have argued that many people are involuntarily pushed into boundaryless careers by structural changes in organizational, industrial, occupational, or even national environments. Compared to voluntary career movers, people pushed into involuntary career mobility are less motivated and less prepared for the challenges of being laid off, demoted, shifted into temporary work or peripheral positions, which makes the coping process more challenging for them ([Fouad & Bynner, 2008](#); [Inkson et al., 2012](#)). In addition, individuals who can exercise voluntary career mobility are often professionals, technicians or managers who have the skills, competencies and resources to make the transitions ([Feldman & Ng, 2007](#); [Inkson et al., 2012](#)). By contrast, individuals who are involuntarily pushed into boundaryless careers are often those with lower levels of skills or social status; the lack of adaptive capabilities and career resources makes them more vulnerable ([Fouad & Bynner, 2008](#); [Inkson et al., 2012](#)). As a result, individuals in these situations often suffer from high levels of anxiety, depression and burnout ([Currie et al., 2006](#); [Fouad & Bynner, 2008](#)), and the negative consequences of boundaryless careers on career success are more evident among them. Therefore, we expect that compared with voluntary career boundarylessness, involuntary career boundarylessness has a more negative effect on career success.

On the other hand, it has been argued that there are a variety of supportive institutional resources, such as mentorship and organizational career management programs ([Greenhaus et al., 2008](#); [Guan et al., 2014](#); [Guan, Zhou, Ye, Jiang, & Zhou, 2015](#)), career counseling and training agencies ([Zeitz et al., 2009](#)), that facilitate people's boundary-crossing behaviors and help them to achieve

career success. Governments also can actively devise and impose relevant policies and legislation to facilitate labor market mobility. National welfare-sustaining policies and legislation (e.g., unemployment subsidies) can make job changes less risky and subsequently increase external mobility (Feldman & Ng, 2007; Fouad & Bynner, 2008; Ng, Sorensen, Eby, & Feldman, 2007). Analyses suggest that these types of institutional supports can strengthen the positive effect and reduce the negative effect of career boundarylessness on career success.

Due to the diverse mechanisms involved in the effects of boundaryless careers on career success as well as the various contingency factors that may moderate these effects, a variety of theoretical perspectives suggest there may not be a simple relationship between career boundaryless and career success (Feldman & Ng, 2007; Greenhaus et al., 2008; Inkson et al., 2012). This review seeks to further illuminate our understanding of the details of this complicated issue by synthesizing across the empirical studies that have investigated the effects of different forms of boundaryless careers on career success.

3. Method

3.1. Literature search

To ensure the completeness of the searched literature, we used a three-stage searching and screening procedure to identify relevant studies. First, we searched for peer-reviewed journal articles published between 1994 and 2018, using the Web of Knowledge's Social Sciences Citation Index (SSCI) database. Since the purpose of the literature search was to identify articles whose topics were related to the empirical relations between boundaryless careers and career success, we searched using multiple key words associated with boundaryless careers (e.g., "boundaryless careers", "physical mobility", "psychological mobility", "contemporary careers", "career variety", "career transition", "organizational mobility", "occupational mobility", "career experience", "career change", "employment mobility", "independent career", "external career") and associated with career success ("career success", "salary", "pay", "wage", "compensation", "income", "reward", "earning", "promotion", "advancement", "ascendancy", "career satisfaction", "achievement", "progression", "benefit"). This search yielded 398 publications.

We then manually screened all of these papers and only retained the papers that reported empirical studies on the effects of various forms of boundaryless careers on indicators of career success. We excluded all papers not relevant to the empirical relations between boundaryless careers and career success, such as non-empirical papers, papers focusing on the relations between boundaryless careers and policies, regulations, labor relations, education issues, organizational performance, and so on. This process yielded 42 empirical publications. Second, we examined the reference sections of the selected articles, as well as major reviews in the field, to identify any studies that we might have overlooked. Third, we also manually scanned through the articles that cited the original work of Arthur (1994), to add papers that were relevant to the topic of this review. As a result, 61 papers (reporting 61 empirical studies) were included in our review.

3.2. Literature coding

Since boundaryless careers have been operationalized in different ways in the empirical papers that we searched, we coded each study according to the measures of career boundarylessness that were used. This resulted in a classification scheme with six different mobility categories (note that some papers used multiple types of mobility measures): (1) 8 studies used composite scores to represent the overall frequency for the different types of career mobility; (2) 6 studies focused on people's career trajectories and used sequence analysis to identify the different patterns of boundaryless careers; (3) 39 studies used inter-organizational mobility (changes of employers); (4) 9 studies used intra-organizational mobility (e.g. upward/downward or lateral job mobility); (5) 3 studies used occupational or industrial mobility; (6) 6 studies used psychological mobility. In addition, we coded for five types of indicators that had been used to measure career success, including (1) earnings (e.g., wage, income, salary), (2) status, promotion and reemployment success, (3) subjective satisfaction (e.g., career satisfaction, job satisfaction), (4) health, subjective well-being and work-life balance (e.g., health risk behaviors, diseases, life satisfaction), (5) skill development and perceived employability.

4. Results

4.1. Overall career boundarylessness and career success

Eight empirical studies examined the relationship between the overall frequency of career mobility and career success. These studies did not differentiate voluntary/involuntary mobility, or the independent effects of each type of mobility (e.g., job changes, employer changes) on career outcomes. Studies taking this approach found that among executives, the variety of roles and responsibilities (e.g., contributor, manager, lead strategist) in past working experiences positively predicted their strategic thinking competency (Dragoni, Oh, Vankatwyk, & Tesluk, 2011), and the composite indicator of career boundarylessness (e.g., the number of positions, firms, industries in their career histories) positively predicted executives' pay (Custodio, Ferreira, & Matos, 2013). Similarly, it was found that overall career boundarylessness predicted more promotions among a sample of Italian MBA alumni (Gerli, Bonesso, & Pizzi, 2015), higher levels of knowing-why and knowing-how competencies, career autonomy, career satisfaction and lower levels of career insecurity among American MBA samples (Colakoglu, 2011; Stumpf, 2014), as well as higher levels of career adaptability and competencies among Chinese HR professionals (Guan, Yang, Zhou, Tian, & Eves, 2016).

On the other hand, Metcalfe et al. (2003) found that among middle and late career employees from manual and non-manual

occupations in Scotland, the accumulated number of career changes positively predicted health risk behaviors, such as cigarette smoking and alcohol consumption, and negatively predicted physical exercise. Hougaard, Nygaard, Holm, Thielen, and Diderichsen (2017) used longitudinal data collected from Danish workers and found that career mobility positively predicted the incidence of heart disease, stroke, ulcer, anxiety/depression and alcohol-related disorders. In sum, these studies revealed positive effects of overall career boundaryless on employees' salary, promotions, career satisfaction, professional competencies, but also negative effects on health-related outcomes (e.g., health risk behaviors and diseases). These results also suggest that the positive effects seem to be more evident among manager or professional samples rather than general employee samples. However, it is important to note that most of these studies used cross-sectional and/or correlational designs which cannot support strong causal conclusions about the relationship between career boundaryless and career success.

4.2. Sequence analysis of the relationship between career boundarylessness and success

Although the overall frequency of career mobility offers an important way to measure career boundarylessness, the sequences of different forms of career mobility also have significant effects on people's career success. We found six studies that used sequence analysis to predict indicators of career success from trajectories of career mobility. Kovalenko and Mortelmans (2014) analyzed the career trajectories of 2934 Belgian respondents and found two career patterns representing the full working careers for men and women: (a) traditional careers, characterized by a prolonged period of attachment to a single organization until retirement, and (b) transitional careers, characterized by a high number of transitions across jobs and employers throughout the career history. Compared with the traditional career pattern, the transitional career pattern was associated with higher salary for both men and women, but also with lower levels of career satisfaction among women. Joseph, Boh, Ang, and Slaughter (2012) examined the career mobility history of 500 individuals who had worked in the information technology (IT) profession, and classified their careers into three groups: (a) IT careers, in which the individual entered the IT profession at an early career stage and remained within the IT profession, (b) professional labor market (PLM) careers, in which the individual exited the IT profession at an early career stage and developed a new career in non-IT professional or managerial jobs, and (c) secondary labor market (SLM) careers, in which the individual entered IT jobs at a later career stage, but then moved into jobs lower in economic status. The results showed that the annual pay did not differ between IT and PLM careers, but individuals in SLM careers attained the lowest pay. Individuals are SLM careers also had a lower level of education than the other two groups. Kim (2013) found that in the US labor market, although lower-skilled workers had more opportunities to change their occupations, their career mobility occurred mainly within their original social class, which strengthened the existing class boundaries. These findings suggest that boundaryless careers had more positive effects on higher-skilled than lower-skilled workers.

Koch, Forgues, and Monties (2017) analyzed the employment trajectories of all of the Fortune 100 CEOs and found that the CEO careers in these big companies were characterized by traditional trajectories consisting of steady progression within the company but not mobility between firms and industries. Blair-Loy (1999) analyzed the career trajectories of 56 women in high-ranking, finance-related jobs, and found that although the careers of some participants were characterized by transitions across firms, job levels, and occupations, the majority of these participants still followed the traditional career patterns by being promoted to high levels within their companies or by starting their own business. Biemann and Wolf (2009) examined the career patterns of 166 top managers from five countries (Denmark, Germany, Japan, the United Kingdom and the United States), and found that both inter-organizational and intra-organizational mobility were effective in facilitating career progression for these top managers, although in Japanese companies the internal labor market strategies were more effective.

These studies suggest that among employees with full working careers, career boundaryless has a positive effect on income, although one study showed that it has a negative effect on subjective success for women (Kovalenko & Mortelmans, 2014). The positive effects of career boundarylessness seemed to be stronger at an early career stage (Joseph et al., 2012) and among high-skilled workers (Kim, 2013). For top managers, the evidence suggested that intra-organizational mobility seemed to have important beneficial effects for their promotions, especially in big companies and in countries characterized by long-term employment relationships (Biemann & Wolf, 2009; Koch et al., 2017).

4.3. Inter-organizational mobility and career success

In our sample, the largest group of studies, i.e., 39 empirical papers, examined the relationship between inter-organizational mobility and career success. Of these, 22 examined the relationship between general inter-organizational mobility and career success, with 9 of them focusing on manager and professional samples, and 14 focusing on employee samples. Of the remaining studies, 5 merely focused either specifically on voluntary ($N = 4$) or involuntary changes ($N = 1$), and 12 incorporated both voluntary and involuntary changes. Our analysis of these papers showed that the general effects of inter-organizational mobility on indicators of career success differed across studies, and appeared to depend on a variety of individual and contextual factors.

4.3.1. Employer changes and career success among managers and professionals

Among executives, Cheramie, Sturman, and Walsh (2007) found that changing employers had positive effects on their salary and status; however, Hamori and Kakarika (2009) found that among the largest companies in Europe and USA, inter-organizational mobility decreased the speed of being promoted to top management positions, although the causality of this relationship cannot be determined. Among general managers in USA and Hong Kong, inter-organizational mobility was found to positively predict compensation, but the positive effect was stronger among males (Brett & Stroh, 1997; Lam & Dreher, 2004), and white-male managers

(Dreher & Cox, 2000). Sammarra, Profili, and Innocenti (2013) found that among graduates from an Italian business school, inter-organizational mobility only had a positive impact on salary for those moving into professional positions, but not for managers.

For other professions, it was found that changing employers alleviated the personal and work-related burnout of Swedish civil servants (Liljegen & Ekberg, 2009), but decreased the productivity of early-career economists and management researchers in Germany, especially for those who had more collaborators in former institutes, or those who had fewer coauthors in the new institutes (Baker, 2015). Barbezat and Hughes (2001) found that among American university faculty members, salary was not predicted by inter-organizational mobility until the number of job changes reached four. A negative relationship with salary was found when organizational mobility was higher than four. Further analysis suggested that women incurred a more serious salary penalty in their job mobility.

4.3.2. Employer changes and career success among employee samples

Forrier, Verbruggen, and De Cuyper (2015) found that among Belgian employees, past external job transitions positively predicted movement capital (human capital, social capital, self-awareness and adaptability), which in turn predicted employability. However, a negative relationship between inter-organizational mobility and income was also found among employee samples from the USA (Hammida, 2004; Valcour & Tolbert, 2003). King, Burke, and Pemberton (2005) found that in the UK IT industry, job candidates' past inter-organizational mobility history had negative effects on the probability of being shortlisted for permanent vacancies.

In terms of the moderators, findings from the UK and Germany showed that the positive effect of inter-organizational mobility on salary was stronger at an early career stage (Dustmann & Pereira, 2008). Alon and Tienda (2005) found that young American women with less education benefited more from their job changes during the first four post-school years. Kronberg (2014) found that among American male workers with less education, the Black-White gap in salary gains from mobility first widened and then narrowed since the 1970s, whereas for male college graduates, the gap first narrowed then widened. Monsueto, Bichara, and Cunha (2014) found that higher-paid workers in Brazil benefited more from mobility than poorer workers. In Spain, inter-organizational mobility was positively related to wage growth for permanent workers (Amuedo-Dorantes & Serrano-Padial, 2007); for contract workers, the changes of employers had the most beneficial effects on their income when they switched into permanent employment status, especially among female workers (Blazquez, 2009). Fasang, Geerdes, and Schomann (2012) found that among employees from 23 European countries, the positive effect of external mobility on job satisfaction was stronger when there were increases in job levels, and in nations with more liberal labor market policies.

4.3.3. Voluntary and involuntary employer changes and career success

Four inter-organizational mobility studies focused on the relationship between voluntary mobility and career success. Mao (2002) found that among Taiwan MBA holders, the positive relationship between voluntary employer changes and salary was strongest in medium-sized (100–999) firms, followed by small firms (size 1–99), whereas this relationship was not significant in large firms (more than 1000 employees). Lam, Ng, and Feldman (2012) found that among professionals and managers in USA and Hong Kong, external job mobility positively predicted salary, but the positive effect was strongest among early-career participants. Pavlopoulos, Fouarge, Muffels, and Vermunt (2014) found that among fulltime male workers in the UK and Germany, the positive effect of changing employer on wage growth was only significant for the low-paid workers but not for the high-paid workers. Latzke, Kattenbach, Schneidhofer, Schramm, and Mayrhofer (2016) found that among German employees, voluntary changes of employer predicted a greater increase in wages and job satisfaction, and professionals benefited more from voluntary employer changes in income and job satisfaction than did other types of white collar workers or blue collar workers. Low-paid employees, young employees and male employees also gained more income increase through voluntary mobility. Finally, Eby's (2001) study of people who experienced involuntary mobility because of a spouse or partner changing employers found that their indicators of objective career success, such as pay and promotion opportunities, were decreased, but their subjective career success was largely not affected.

4.3.4. Comparison of the effects of voluntary versus involuntary employer changes

An analysis of the 14 studies incorporating both voluntary and involuntary employer changes suggested that compared with involuntary employer changes, voluntary changes generally predicted more advantageous outcomes, such as increased income among employees in the USA (Fuller, 2008; Keith & McWilliams, 1995, 1997; Polsky, 1999), France (Perez & Sanz, 2005), Germany (Perez & Sanz, 2005; Schmelzer, 2012), Spain (Davia, 2010; Perez & Sanz, 2005), Italy (Del Bono & Vuri, 2011), Portugal (Perez & Sanz, 2005), Sweden (le Grand & Tahlin, 2002) and China (Wu, 2010), as well as increased job satisfaction among employees from the Netherlands (Vandervelde & Feij, 1995) and from Norway (Kalleberg & Mastekaasa, 2001).

On the other hand, a variety of moderators were also revealed in these studies. For example, it was found that in Germany, voluntary mobility through direct job change had a positive effect on salary, whereas voluntary mobility followed by unemployment had negative effect on the movers' salary (Perez & Sanz, 2005; Schmelzer, 2012). Fuller (2008) also found that employees who were less attached to labor markets benefited less from changing employers. In addition, it was found that the positive effect of voluntary mobility on salary increase was stronger among males (Del Bono & Vuri, 2011; Fuller, 2008) and young employees (Davia, 2010; Fuller, 2008; Polsky, 1999). Kronberg (2013) found that initial occupational standings played important roles in predicting the effects of voluntary/involuntary mobility on salary among American employees. Employees who had good jobs were more likely to gain more salary through both voluntary and involuntary mobility. Voluntary mobility benefited women more than men, but involuntary mobility benefitted men more than women. In contrast, employees who left bad jobs experienced salary losses, regardless of whether the leave was voluntary or involuntary. Perez and Sanz (2005) found that compared with employees from Germany, Portugal and

France, the positive effect of voluntary mobility was smaller among Spanish employees.

4.4. Intra-organizational mobility and career success

Nine empirical studies examined the relationship between intra-organizational job mobility and career success. Of these studies, 3 studies focused on specific types of intra-organizational mobility (e.g., upward/downward and lateral job mobility), 3 studies focused specifically on voluntary mobility, and the final 3 studies focused on general internal job mobility without differentiating voluntary/involuntary mobility or the specific type of mobility. Compared with downward or lateral mobility, upward mobility was found to predict increased salary (Rigotti, Korek, & Otto, 2014), job satisfaction and pay satisfaction (Fasang et al., 2012), as well as career satisfaction (Kalleberg & Mastekaasa, 2001; Rigotti et al., 2014). However, Rigotti et al. (2014) found that upward job mobility also predicted increased strain (irritation) through elevated time pressure and increased work-home interference. Voluntary internal mobility was found to predict income growth (Chudzikowski, 2012; le Grand & Tahlin, 2002), especially for low-paid workers in countries with a liberal labor market such as the UK (Pavlopoulos et al., 2014).

General internal mobility was not related to perceived movement capital or employability among Belgian employees (Forrier et al., 2015) nor to mental health and burnout among Swedish civil servants (Liljegren & Ekberg, 2009). Valcour and Tolbert (2003) found that among employees from USA, intra-organizational mobility positively predicted earnings, but had a negative effect on perceived success. Valcour and Tolbert (2003) further found that although frequent intra-organizational mobility helped women to achieve objective career success, it was also associated with a high likelihood of being divorced and having fewer children; in contrast, men having more intra-organizational mobility had more children. These results suggest that there was a tradeoff between objective success and family life for women, but not for men.

4.5. Occupational or industrial mobility and career success

Carless and Arnup (2011) found that among employees from Australia, occupational change had positive effects on job satisfaction, job security and reduced the number of hours worked, but did not have effects on salary. Monsueto et al. (2014) found that changes of occupational segment predicted an increase in wages, but the wage increase obtained by changing occupational segment was smaller for poorer workers than for wealthier ones in Brazil. King et al. (2005) found that among job candidates in the UK IT industry, prior industrial mobility (number of industries worked for) had no effect on the probability of being shortlisted for a temporary vacancy, but had a negative effect on being shortlisted for a permanent one.

4.6. Psychological mobility and career success

Most research on the relationship between boundaryless career orientation and career success has adopted the measure developed by Briscoe and Hall (2006), which differentiated between the construct of boundaryless mindset (the preference to work across organizational boundaries) and mobility preference (the preference to move across different employers). Six studies were reviewed in this section.

Boundaryless mindset has been found to be positively related to employees' satisfaction with their career progress (Briscoe, Henagan, Burton, & Murphy, 2012), and unemployed adults' employability, self-esteem, job search behavior and reemployment success (McArdle, Waters, Briscoe, & Hall, 2007). Verbruggen (2012) found that boundaryless mindset positively predicted employees' wage and promotions in a working sample from Belgium, with this relationship partially mediated by functional mobility. Enache, Sallan, Simo and Fernandez (2011) examined the relationship between boundaryless mindset and career satisfaction among 150 Spanish professionals, but found that boundaryless mindset did not predict career satisfaction. Volmer and Spurk (2011) conducted a survey study among 116 German employees, and found that boundaryless mindset was positively related to the number of promotions.

Enache et al. (2011) found that organizational mobility preference was negatively related to career satisfaction among 150 Spanish professionals. Verbruggen (2012) found that among employees in Belgium, organizational mobility preference was related to fewer promotions, lower job satisfaction and lower career satisfaction, and this relationship was mediated by organizational mobility. Mobility preference has also been found to be negatively related to job satisfaction, career satisfaction and life satisfaction among workers from Portugal (Rodrigues, Guest, Oliveira, & Alfes, 2015). However, Volmer and Spurk (2011) found that among German employees, organizational mobility preference positively predicted their salary. In sum, boundaryless mindset is generally associated with positive outcomes, but mobility preference seems to have mixed effects on career success.

5. Integration and future research

5.1. Summary of results

Our review supports the view that boundaryless careers can have both positive and negative effects on individuals' career success, and these effects depend on various individual and contextual factors. In the following section, we synthesize previous results by summarizing how the 5 general indicators of career success, i.e., (1) earnings, (2) status, promotion and reemployment success, (3) satisfaction, (4) health, subjective well-being and work-life balance, (5) skill development and perceived employability, were predicted by the different indicators of career boundarylessness.

5.1.1. Career boundarylessness and earnings

Overall, across the different studies reviewed, relationships were positive, and there was evidence suggesting the importance of approaches used to operationalize career boundarylessness and a relatively large number of moderators. The composite score of career boundarylessness was found to positively predict executives' pay (Custodio et al., 2013). Results from sequence analysis revealed that among employee samples, a transitional career was associated with higher salary than a traditional career (Kovalenko & Mortelmans, 2014), but a lower level of salary was associated with a transitional career among employees with lower levels of education or skills, and those who made the transitions at a late career stage (Joseph et al., 2012; Kim, 2013). For inter-organizational mobility, it was found that voluntary rather than involuntary mobility resulted in more salary increase (e.g., Davia, 2010; Del Bono & Vuri, 2011; Fuller, 2008; le Grand & Tahlin, 2002; Polsky, 1999; Schmelzer, 2012; Wu, 2010). In addition, it was found that males rather than females (e.g., Barbezat & Hughes, 2001; Brett & Stroh, 1997; Del Bono & Vuri, 2011; Fuller, 2008; Lam & Dreher, 2004), members of high-status race groups such as whites (e.g., Dreher & Cox, 2000; Kronberg, 2014), individuals at early-career stages (Alon & Tienda, 2005; Davia, 2010; Dustmann & Pereira, 2008; Fuller, 2008; Lam et al., 2012), in permanent contracts (Amuedo-Dorantes & Serrano-Padial, 2007; Blazquez, 2009), with a higher level of prior pay (Kronberg, 2013; Monsueto et al., 2014; Pavlopoulos et al., 2014), or with a higher level of labor market attachment (Fuller, 2008; Perez & Sanz, 2005; Schmelzer, 2012) are more likely to achieve salary increase through inter-organizational mobility. Intra-organizational mobility was found to be positively related to earnings (Valcour & Tolbert, 2003), especially when the mobility is upward (Rigotti et al., 2014) or voluntary (Chudzikowski, 2012; le Grand & Tahlin, 2002), or in a liberal labor market (Pavlopoulos et al., 2014). Occupational mobility positively predicted wages among workers in Brazil, especially among those with higher prior salary (Monsueto et al., 2014). The two dimensions of psychological mobility, boundaryless mindset and organizational mobility preference, were both found to positively predict salary (Verbruggen, 2012; Volmer & Spurk, 2011).

5.1.2. Career boundarylessness and status, promotion and reemployment success

Although it was found that the overall career boundarylessness and the number of employer changes positively predicted managers' status and promotions (Cherameie et al., 2007; Gerli et al., 2015), researchers among CEOs and top managers suggested that their promotions were more based on steady progression within the company but not external mobility between firms and industries (Blair-Loy, 1999; Koch et al., 2017). It was also found that in the UK IT industry, job candidates' past inter-organizational mobility and industrial mobility had negative effects on the probability of being shortlisted for permanent positions (King et al., 2005). In big companies (Hamori & Kakarika, 2009) and in countries characterized by long-term employment orientations such as Japan (Biemann & Wolf, 2009), the positive effect of internal mobility on promotion is even stronger. Boundaryless mindset has been found to be positively related to employees' promotion (Briscoe et al., 2012; Verbruggen, 2012; Volmer & Spurk, 2011), and unemployed people's reemployment success (McArdle et al., 2007); however, organizational mobility preference was found to be related to fewer promotions (Verbruggen, 2012).

5.1.3. Career boundarylessness and subjective satisfaction

Overall career boundarylessness was found to be positively related to career satisfaction among American MBA samples (Colakoglu, 2011; Stumpf, 2014); there was also evidence showing that inter-organizational mobility was associated with a lower level of burnout (Liljegren & Ekberg, 2009) and a higher level of job satisfaction (Latzke et al., 2016). Compared with involuntary employer changes, voluntary changes had a stronger positive effect on job satisfaction (Kalleberg & Mastekaasa, 2001; Vandervelde & Feij, 1995). The effect of inter-organizational mobility on subjective satisfaction also depends on individuals' professions (Latzke et al., 2016), the associated job level changes and national environments (Fasang et al., 2012). Although general intra-organizational mobility was found to negatively predict perceived success among employees from USA (Valcour & Tolbert, 2003), upward mobility was found to predict increased job satisfaction (Fasang et al., 2012) and career satisfaction (Kalleberg & Mastekaasa, 2001; Rigotti et al., 2014). Carless and Arnup (2011) found that occupational change had positive effects on job satisfaction and perceived job security among employees from Australia. Boundaryless mindset has been found to be positively related to employees' satisfaction with their career progress (Briscoe et al., 2012); in contrast, organizational mobility preference was negatively related to career satisfaction (Enache et al., 2011; Rodrigues et al., 2015; Verbruggen, 2012).

5.1.4. Career boundarylessness and subjective well-being, health and work-life balance

The accumulated number of career changes positively predicted health risk behaviors among middle and late career employees from Scotland (Metcalfe et al., 2003) and incidence of mental problems among Danish workers (Hougaard et al., 2017). Rigotti et al. (2014) found that upward job mobility also predicted increased strain (irritation) through elevated time pressure and increased work-home interference. Valcour and Tolbert (2003) further found that intra-organizational mobility resulted in a lower level of work-life balance among women.

5.1.5. Career boundarylessness, skill development and perceived employability

The composite score of career boundarylessness positively predicted executives' strategic thinking competency (Dragoni et al., 2011), higher levels of knowing-why and knowing-how competencies among American MBA samples (Colakoglu, 2011; Stumpf, 2014), higher levels of career adaptability and competencies among Chinese HR professionals (Guan et al., 2016), as well as higher movement capital and predicted employability among Belgian employees (Forrier et al., 2015). Boundaryless mindset has been found to be positively related unemployed adults' employability (McArdle et al., 2007).

Overall, our review suggests that to better understand the complicated relationship between career boundarylessness and career

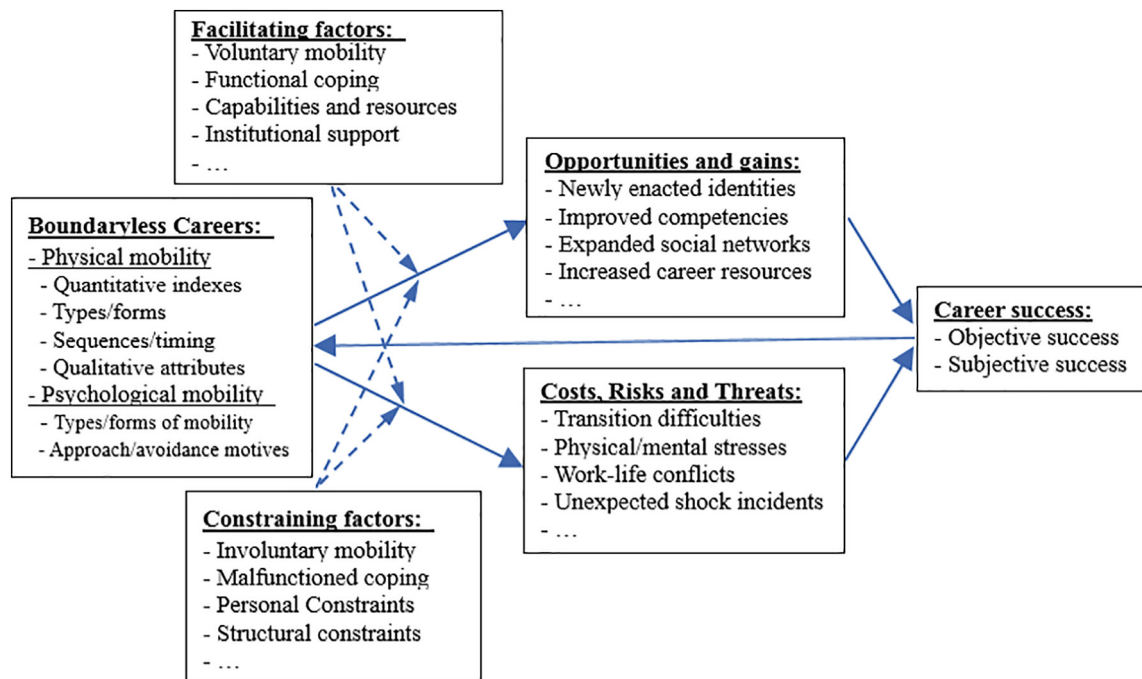


Fig. 1. An integrative model of career boundarylessness and career success.

success, it is necessary to adopt a more systematic framework to organize the different components of boundaryless careers. In addition, the results also suggest that there are multiple mechanisms involved in the relationship between career boundarylessness and success, thus it is important to integrate multiple perspectives to understand these complicated effects. In Fig. 1 and the following material, we offer an integrative framework to organize the relations among these factors and highlight the important gaps below in order to guide future research.

5.2. Conceptualization of physical/psychological mobility

Although diverse indicators have been used to measure physical and psychological mobility, our literature review shows an urgent need to clarify the structure and dimensionality of these important constructs. The quantitative measures that have been used, such as the overall number of career transitions, offer insights on the effects of the frequency of the various career transitions, but they are often constructed in a manner that discards important information on the specific types of mobility, the timing of mobility, as well as the qualitative attributes associated with the mobility. Therefore, future research should attempt to develop a complete and clear structure for the concept of career boundarylessness (Forrier et al., 2009; Greenhaus et al., 2008; Feldman & Ng, 2007; Ng et al., 2007). Drawing upon the integrated model of work experience (Tesluk & Jacobs, 1998), we propose that boundaryless careers should be treated as a multidimensional and temporarily dynamic construct, which can be reflected by the following components:

5.2.1. Types of physical mobility

Our analysis shows that boundaryless careers can be manifested in different forms of career mobility, such as role mobility, job-related mobility, organizational mobility, changes of employment forms, occupational mobility, industrial mobility, geographical mobility, and so on. Failure to recognize and differentiate the various forms of boundarylessness limits the understanding of how each type of mobility influences individuals' career success (Greenhaus et al., 2008). For example, previous research suggests that although overall career boundaryless positively predicts the salary of CEOs (Custodio et al., 2013), many top managers' career paths appear to be driven by intra-organizational job mobility rather than inter-organizational mobility (Blair-Loy, 1999; Koch et al., 2017). In addition, the various forms of career mobility may interact with each other in predicting important career outcomes, and these effects seem also to depend on the labor market settings in different industries, occupations and regions. Thus, the differentiation of the different types of boundaryless careers helps to establish a clearer understanding of their effects on the various indicators of career success.

5.2.2. Sequence and timing of physical mobility

Research findings based on sequence analysis show that sequences and timing of career mobility can shape the different patterns of career trajectories, and ultimately determine their effects on career success. For example, the research by Joseph et al. (2012) shows that for IT professionals, to enter or quit this profession at an earlier career stage could produce more positive effects on their

career success. Incorporating the sequence and timing of career mobility can significantly enrich current understanding of how the different forms of mobility interact with sequences and timing in affecting individuals' career success (Biemann, Zacher, & Feldman, 2012; Kovalenko & Mortelmans, 2014).

5.2.3. Qualitative aspects of physical mobility

The qualitative component of boundaryless careers refers to the specific attributes of changes involved in each career situation, such as the skills required by the new tasks and duties, the challenges associated with the new working environments, and so on. For example, Fasang et al. (2012) found that the positive effect of external mobility on job satisfaction was stronger when the employer changes were accompanied by increases in role responsibilities. The highly codified professional occupations, such as architect, engineer, and lawyer, have clearly defined knowledge and skills, as well as bundles of distinctive tasks or services associated with these knowledge and skills. These specialized skills and expertise create barriers to mobility into these occupations, and also make it more difficult for career movers to achieve success. In contrast, it is much easier to move into an occupation with a lower level of codification (Schniper, 2005). These qualitative components of career transitions can be reflected by extant theories such as the Job Characteristics Model (Hackman & Oldham, 1974), and it is possible that the changes of levels of task autonomy, complexity, significance and feedback may have significant effects on individuals' subjective evaluations of their career success.

5.2.4. Psychological mobility

The most direct measure of psychological mobility is the “boundaryless career orientation” scale (Briscoe & Hall, 2006; Gubler, Arnold, & Coombs, 2014). Previous research revealed that a boundaryless mindset generally has positive effects on career success, but mobility preference has mixed effects. We propose that these different effects may be due to the different motivational factors underlying these two dimensions. In accord with suggestions by Feldman and Ng (2007), the intention to pursue a boundaryless career can be driven by both approach motivation, which refers to the sensitivity and effort to achieving positive outcomes, and avoidance motivation, which refers to the sensitivity and effort to preventing negative outcomes. The boundaryless career mindset refers to individuals' interest in working with people outside the organization and generally reflects an approach motivation. By contrast, although mobility preference may be driven by the motivation to pursue a self-directed career, it also may reflect motivations to avoid negative work experiences, such as job insecurity and person-organization misfit (Direnzo & Greenhaus, 2011). Future research may adopt the approach/avoidance framework to better understand the mechanisms underlying the distinct effects of these psychological mobility dimensions on career success.

5.3. An integrative perspective on the mixed effects of boundaryless careers on career success

5.3.1. Mediational mechanisms

In addition to the conceptualization and operationalization issues discussed above, future research should also integrate relevant theoretical perspectives to develop a more comprehensive understanding of the mixed effects of career boundarylessness on career success. The agentic perspective provides an insightful lens to understand the positive effects of career boundarylessness on the enactment of new identities, skill development, accrual of career resources, and so on (Arthur & Rousseau, 1996; Weick, 1996). Boundaryless careers entail changes of work and non-work identities at the individual, relational and collective levels, and these changes may increase individuals' self-complexity and help them to achieve adaptive outcomes (Lord, Hannah, & Jennings, 2011). The stress perspective and structural perspective can enrich the agentic perspective by showing the various stresses and costs associated with boundaryless careers, which help to understand the negative consequences of boundaryless careers on career development (Baruch & Vardi, 2016; Currie et al., 2006; Greenhaus et al., 2008; Jackson, 1996). Integration of multiple perspectives helps to develop a more balanced view of the positive and negative consequences associated with boundaryless careers, and helps to advance current understanding of the coexisting mechanisms underlying the relationship between career boundarylessness and career success (Baruch & Vardi, 2016; Fouad & Bynner, 2008; Inkson et al., 2012).

5.3.2. Moderators

The current review reveals a series of individual and structural moderators for the effects of career boundarylessness on career success, such as the reasons for mobility (e.g., voluntary vs. involuntary), demographic factors (e.g., gender, age, race, career stages), capabilities (e.g., education, skill level, efficacy), social factors (e.g., family roles, social connections), organizational factors (e.g., firm size), labor market characteristics (e.g., profession, pay level, employment opportunities, labor market attachment) and national characteristics (e.g., Labor law). These findings support a contingency approach to the complicated effects of boundaryless careers on career success. Future research should continue to examine the diverse facilitating and constraining factors on the relationship between career boundarylessness and career success.

The agentic perspective suggests that when individuals have a strong motivation to engage in boundaryless careers, they tend to proactively plan and prepare for the career transitions, in order to achieve their career goals. Future research should continue to examine how the different motives underlying boundaryless careers influence their effects on career success. Second, the stress and coping perspective suggests that the coping strategies used by individuals also play important roles in determining the results of career transitions. The career competencies of “knowing why”, “knowing how” and “knowing whom” (Arthur et al., 1995), career adaptabilities (Hall, 2004; Savickas, 2013), and the various types of career resources (Hirschi, 2012) may help to reduce the negative effects of transitional stresses and costs, and strengthen the positive effects of career boundarylessness on career success.

In addition to the above individual factors, the various structural and institutional factors are also likely to influence the learning,

enacting and coping process in career transitions, thereby moderating the relationship between career boundarylessness and career success. Structural constraints, such as existing career boundaries and the labor market segmentation, create difficulties for individuals to overcome in their career transitions, and are likely to limit the choices of coping strategies, and reduce the positive effects of career boundaryless on success (Gunz et al., 2000; Inkson et al., 2012). On the other hand, supportive environmental factors, such as mentorship and organizational career management programs (Greenhaus et al., 2008), career counseling and training agencies (Zeitz et al., 2009) and social welfare systems (Feldman & Ng, 2007), can help individuals to take control of career transition situations.

5.4. Curvilinear and reciprocal relationships

In addition to the linear relationship between career boundarylessness and career success, more research should be done to examine possible curvilinear relationships between them. For example, the results found by Barbezat and Hughes (2001) showed that among American university faculty members, the effect of inter-organizational mobility on salary was positive only until the number of job changes reached four and became negative when the number was higher than four. These findings suggest that the extremes of career boundarylessness (no mobility or lots of mobility) have damaging effects on individuals' career success, but that voluntary, moderate changes can enhance it. That is, individuals who have a moderate level of career mobility may get access to more new opportunities than those who do not move; in addition, the amount of stresses, risks and losses associated with moderate career changes is also lower than excessive changes. The potential curvilinear relationship and associated moderators warrant further research.

Until now, most work has only focused on the effects of boundaryless careers on career success, and has largely ignored how career success might influence individuals' boundaryless careers. Several empirical studies tapped into this important question by examining the effect of career success on individuals' subsequent career mobility (Carless & Arnup, 2011; Cheramie et al., 2007; Hougaard et al., 2017; Stumpf, 2014). For example, Cheramie et al. (2007) found that executives' compensation negatively predicted subsequent job movements. Similarly, Stumpf (2014) found that among American professionals and managers, past promotions and career satisfaction had negative effects on the job, organizational and occupational mobility in the future. Weick (1996) has argued that a boundaryless career is a "story of shifting identities" (p. 40), which suggests that there may be a dynamic process linking boundaryless careers and career success. That is, a career transition may lead to career success or failure in the next job, and that experience may further trigger or inhibit one's future career transitions. Therefore, the effect of career success on subsequent mobility may also rely on a variety of factors that are related to individuals' motives, capabilities, resources, as well as the structural constraints and institutional support. The complicated interdependence of boundaryless careers and career success should be examined in future research by adopting longitudinal or field experimental designs.

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